

Work Order ID 52623

October 5, 2009 8:24:20 AM



Page 1

Item ID: D206-667-103TRN

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Turning DetailL

Start Date: 05/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: BPDate: 09-10-5

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D206-667-143

Rev C

100

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio
FA087□2-Turn first side as per Folio FA087□3-File down transition lines
smooth.

Q.M 09 - 10 - 06 ①

110

0.00



QC1- Inspect dimensions to dimension sheet

QC

Memo

0.00

Quality Control

Q.M 09 - 10 - 06 ①

120

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA087□2-File down transition lines smooth.
□
3-Remove sand and plugs

Q.M 09 - 10 - 06 ①

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

QC1- Inspect dimensions to dimension sheet

0.00



QC

Memo

0.00

Quality Control

Q.m 09 -10 -06 ①

140

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

1 g - AWM 9-10-07

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

1 g - AWM 9-10-07

ME
09-10-07

Work Order ID 52623

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Page 3

Item ID: D206-667-103TRN

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Turning DetailL

Start Date: 05/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160 QC3- Inspect Part Finish

0.00



QC Memo

0.00

Quality Control

Am 01-10-09 @

170 Packaging

0.00



Packaging Memo

0.00

Packaging Identify and stock in kanban rack ☐ Location: X-TUBE CELL

1 / - AWM 9-10-07

180 QC21- Final Inspection - Work Order Release

0.00



QC Memo

0.00

Quality Control

09/10/08

Picklist Print

October 5, 2009 8:24:20 AM

Page 1

Work Order ID: 52623



Parent Item: D206-667-103TRNRevC



Parent Item Name: Crosstube Turning DetailL

Start Date: 05/10/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6002-115RevA		Manufactured	No			110	Each	68.0000	1.0000			
Crosstube Material												

Am 09-10-08 @

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	68	
34684	5	
34776	63	

i

DART AEROSPACE LTD		Work Order: 52423
Description: Crosstube Assembly (206L High Fwd)		Part Number: D206-667-143
Inspection Dwg: L206-667-143 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.243	✓			
	1.982	+0.005/-0.000	1.986	✓			
	2.019	+0.005/-0.000	2.023	✓			
	2.058	+0.005/-0.000	2.063	✓			
	2.097	+0.005/-0.000	2.103	✓			
	2.136	+0.005/-0.000	2.140	✓			
	2.176	+0.005/-0.000	2.181	✓			
	2.201	+0.005/-0.000	2.206	✓			
	0.125	+/-0.010	0.125	✓			
	0.400 x 30°	+/-0.010	0.400x30°	✓			
	R0.063	+/-0.010	R0.063	✓			
	R0.500	+/-0.010	R0.500	✓			
	4.438	+/-0.030	4.438	✓			
SIDE B	104.98	+/-0.020	104.960	✓			
	2.240	+0.005/-0.000	2.240	✓			
	1.982	+0.005/-0.000	1.986	✓			
	2.019	+0.005/-0.000	2.023	✓			
	2.058	+0.005/-0.000	2.063	✓			
	2.097	+0.005/-0.000	2.103	✓			
	2.136	+0.005/-0.000	2.140	✓			
	2.176	+0.005/-0.000	2.181	✓			
	2.201	+0.005/-0.000	2.206	✓			
	0.125	+/-0.010	0.125	✓			
	0.400 x 30°	+/-0.010	0.400x30°	✓			
	R0.063	+/-0.010	R0.063	✓			
	R0.500	+/-0.010	R0.500	✓			
	4.438	+/-0.030	4.437	✓			

Measured by: O.M.	Audited by: AWM	Prototype Approval: N/A
Date: 09.10.06	Date: 9.10.7.	Date: N/A

Rev	Date	Change	Revised by	Approved
A	04.05.06	New Issue (P/O D206-667-103)	KJ/RF	
B	06.03.09	Dwg Rev updated	KJ/JLM	

Item	Qty -143	Part Number	Description
1	X	D206-667-143	CROSSTUBE ASSEMBLY (206L HIGH FWD)
2	1	D6002-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

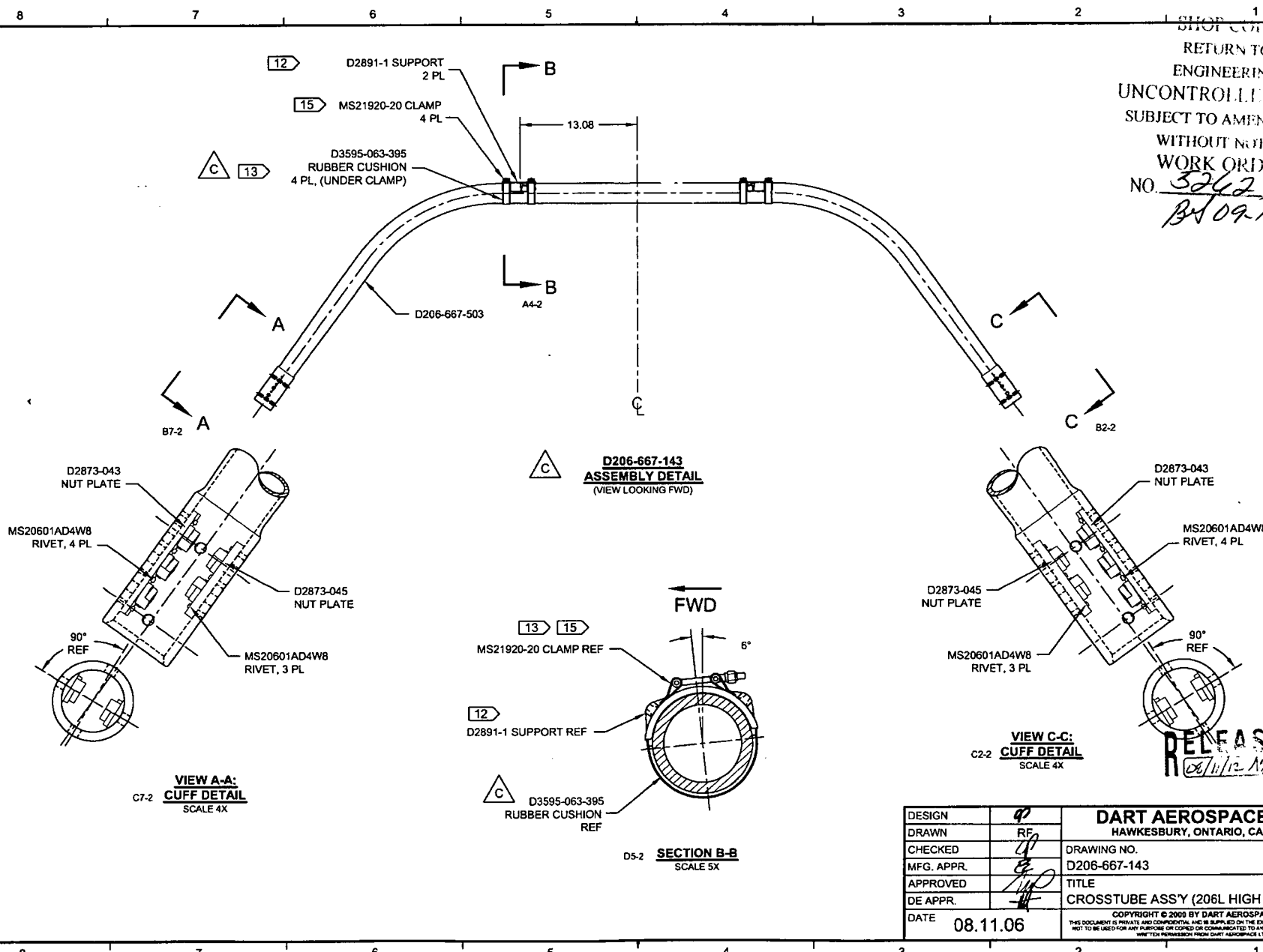
- 1) MATERIAL: MANUFACTURED FROM D6002-115
FINISHED LENGTH = 104.98±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-143" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 15.5 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2858-400-694 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCE (ZN D3-3, C4-3, C5-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>9</u>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<u>9</u>	DRAWING NO.	REV. C
MFG. APPR.	<u>9</u>	D206-667-143	SHEET 1 OF 4
APPROVED	<u>9</u>	TITLE	SCALE
DE APPR.	<u>9</u>	CROSSTUBE ASSY (206L HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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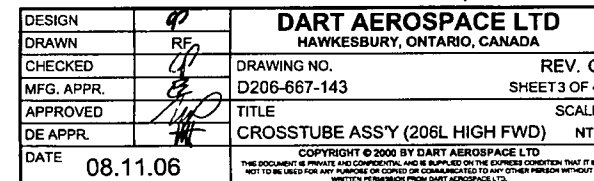


DESIGN	97	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4	DRAWING NO.	REV. C
MFG. APPR.	8	D206-667-143	SHEET 2 OF 4
APPROVED	4	TITLE	SCALE
DE APPR.	4	CROSSTUBE ASS'Y (206L HIGH FWD)	NTS
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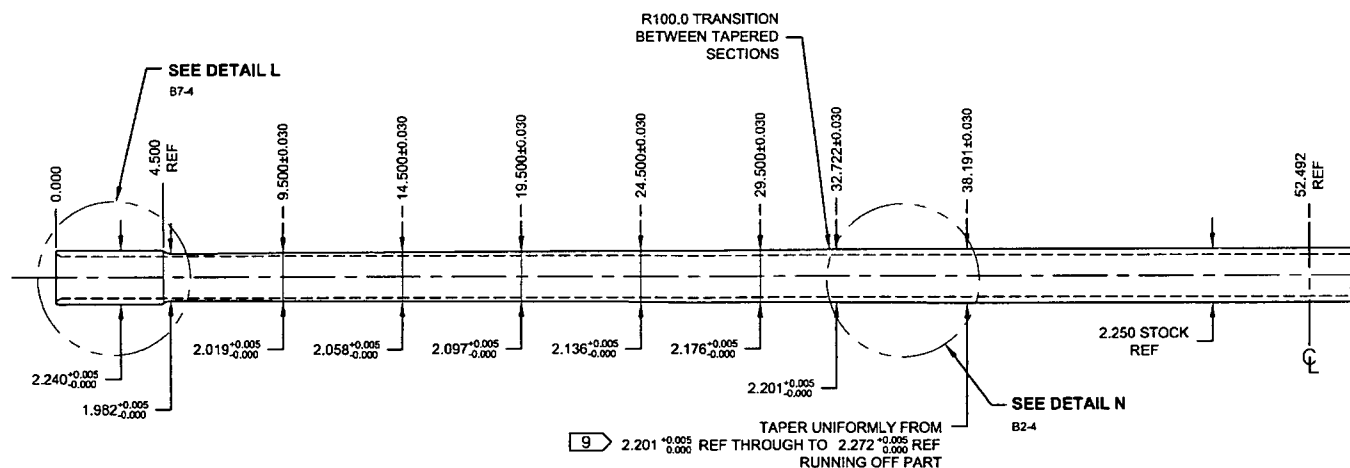


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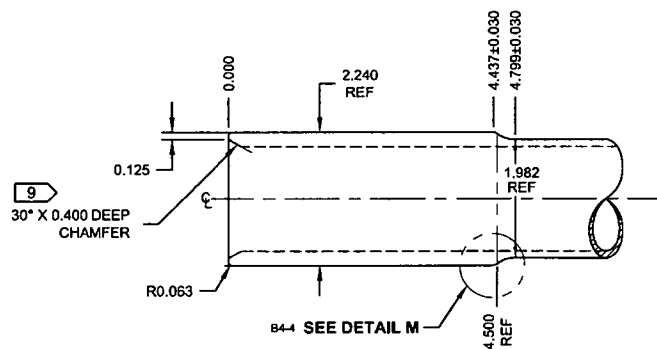
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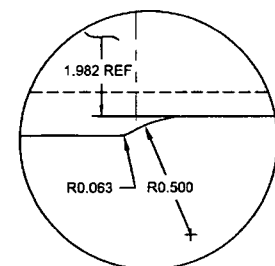
2009-10-3



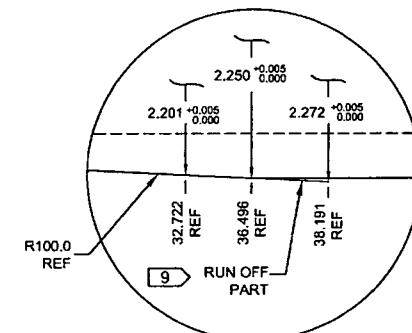
TURNING DETAIL



**DETAIL L:
CROSSTUBE CUFF**
D7-4 NOT TO SCALE



**DETAIL M:
CUFF TRANSITION**
A6-4 NOT TO SCALE



**DETAIL N:
TAPER RUN-OFF**
C4-4 NOT TO SCALE

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68/11/12

DESIGN	90	DART AEROSPACE LTD
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED	90	DRAWING NO. REV. C
MFG. APPR.	90	D206-667-143 SHEET 4 OF 4
APPROVED	90	TITLE SCALE
DE APPR.	90	CROSSTUBE ASSY (206L HIGH FWD) NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD

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